
AIRWAVES FOR SALE?
AIRWAVES FOR SALE?
AIRWAVES FOR SALE!

SOME THOUGHTS ON BROADCASTING REFORM

Kenneth Robinson

THE IDEA OF USING marketplace mechanisms to regulate the use of the radio frequency spectrum is not new. "Spectrum economics" or "selling the spectrum" has been a staple of the academic literature since at least the early 1950s when Ronald Coase and other Chicago School economists began to propound the idea seriously. What is new today, however, is the higher level of credibility and respectability it has recently attained.

There are several reasons for this. To begin with, the current regulatory regime governing access to and use of the spectrum is clearly showing its age. Its premises date from the 1906 Berlin Radio Conference, where the conferees placed great weight on order, predictability, and other familiar Prussian values. Maximum order would be achieved and chaos avoided, people thought, by neatly carving up the resource into orderly little blocks (allocations) and then requiring applicants for different kinds of radio service to compete only for channels in the pertinent block and, on getting them, use them only for the prescribed purpose. It was almost exclusively an engineer's approach,

Kenneth Robinson is an adviser to the assistant secretary of commerce for communications and information, Department of Commerce. The views expressed here are his own.

and in the telecommunications field, at least, scratch an engineer and you will probably find a closet socialist. Engineers, whether in 1906 or today, typically see redeeming value in "sound" centralized planning and give short shrift to intangible goals such as efficiency and flexibility in the programs they devise.

But if central planning and, above all, order are commendable or even achievable in markets characterized by stable demand and relatively stagnant technology, they quickly become unrealistic (at best) and genuine obstacles to progress (at worst) when both demand and technology advance exponentially. And that, of course, is what has happened in telecommunications.

Since the Korean War era, private and public demand for the radio frequency spectrum has approximately quintupled, as the spectrum has become an essential component of many production processes. On the private side, broadcast television, land mobile radio, and direct broadcast satellites are obvious examples of rapidly growing services that make intensive use of the radio spectrum. On the government side, the elaborate and costly communications systems needed to sustain federal public safety programs, air-traffic control, NASA "moon shots," and defense-related undertakings also

place increasingly heavy demands on the radio spectrum.

This greater demand has put pressure on our traditional, neat, highly regulatory system of rationing radio channel usage. At the same time, advances in radio frequency engineering and associated technologies have made it technically feasible to meet the new demand by exploiting the spectrum far more intensively than we now do. But that requires, in the view of most reformers, the introduction of economic principles into the spectrum-rationing process, and changes of that magnitude come slowly because they alter the distribution of benefits among the players.

One example of this problem is the so-called ransom theory of deregulation, which has stymied broadcast reform for some time. All TV and radio broadcasters would like to be free of the comparative renewal process, and most seek general relief from their "public service" programming obligation as well. But key politicians will go along, if at all, only if the broadcasters agree to pony up large sums to pay for their use of the "people's airwaves." In previous deregulation cases, of course, the government had to pay certain stakeholders in order to facilitate procompetitive change. In rail deregulation, for example, industry's acquiescence was purchased by disbursing substantial amounts of federal funds to improve tracks and roadbeds and to place the Railroad Retirement System on a sounder footing. And both the Ford and Carter administrations' proposals for airline deregulation included employee retraining funds and money-saving concessions on environmental protection rules as necessary components of the package. But in the case of broadcasting, the ransom may come from, instead of go to, the industry.

Some Details

A good way to begin a discussion of spectrum economics is by briefly describing what this so-called invisible resource is, how we currently manage it, and what some of the more notorious problems are that we have encountered.

Back in the nineteenth century, European engineers, most notably the famous Mr. Hertz, discovered, first, that there are radio waves—electrical energy that has escaped into space—

and, second, that these radio waves can be used to communicate. The chief characteristics of any particular radio wave are frequency or wave length (which vary inversely with each other: the frequency times the wave length always equals the speed of light) and intensity (which is a function of transmitter power, usually expressed in watts, and the distance between transmitter and receiver). What engineers consider the usable radio frequency spectrum is the range or band of frequencies from about 30 Hz (1 hertz is a cycle per second) to those in the order of 3 million MHz or 3,000 GHz (1 megahertz is a million cycles per second, and 1,000 MHz equals 1 GHz or gigahertz). Currently, the radio frequency spectrum is allocated from about 30 Hz to 300 GHz, although not all this range is used.

Within this very broad range of radio frequencies there are—by treaty—several dozen bands of frequencies, each with its own peculiarities and prescribed uses. As a point of reference, what is called the "standard broadcast" or AM radio band in the United States consists of the frequencies between 0.535 and 1.605 MHz. Conventional or very high frequency (VHF) television, by comparison, is assigned to two much higher bands (55.25 MHz to 83.25 MHz and 175.25 to 215.75 MHz). And microwave relay systems (which handle most long-distance telephone traffic) use channels in the 4 to 6 GHz range, again very much higher indeed.

In general, the higher the frequency, the more closely the signal takes on the characteristics of visible light. High-frequency services, such as conventional television or microwave relay services, thus tend to require line-of-sight signals that are susceptible to the same kinds of interference that affect visible light (raindrops, reflections, or dust, for instance). As a general rule, too, the higher the frequency range, the more sophisticated and expensive the radio equipment required. Citizens band (CB) radio, for example, operates on the frequencies from 26.9 through 27.2 MHz, and the equipment involved is priced in the hundred dollar range; "cellular mobile radio," by comparison, operates in the 800 MHz range and the equipment accordingly sells for a thousand dollars or more. Finally, the "bandwidth" that a particular service requires—that is, the swath of radio frequencies comprising a given communication channel—ordinarily varies directly with the

amount of information to be transmitted. Radio communication is accomplished by varying the frequency according to how much information is sent. The greater the amount of information to be transmitted, the greater the number of frequencies needed, which is what gave rise to the term bandwidth. Audio transmission of ordinary voices or simple music, for example, involves much less information than does the transmission of a colored moving picture with synchronized sound track. Hence the bandwidth employed for a "broadband" service such as conventional television in the United States, for instance, is 6 MHz—a band encompassing 6 million waves per second—while that for AM radio is just 10 kHz (10,000 waves per second), or one-sixtieth as much. At higher frequency ranges, obtaining the channel space necessary to accommodate a broadband service is not a problem: the number of frequencies between 4.1 and 4.2 GHz is 0.1 GHz, or 100 million. At lower frequency ranges, however, the number of frequencies can be quite small: between 4.1 kHz and 4.2 kHz, for example, there are but 0.1 kHz or 100. Thus, if broadband channel requirements must be accommodated at lower frequency ranges—to keep equipment costs within reason, for example—there can obviously be far fewer available channels. (This, incidentally, goes far toward explaining the current level of concentration in the commercial television industry. More on that later.)

Economic Effects

If the engineering jargon and practices associated with radio frequency management are obscure (though orderly), the economic consequences for both industry and television consumers are not. Take, for example, the commercial television broadcasting system.

In 1952 the FCC, after years of debate, allocated two adjacent chunks of spectrum to VHF television services and subdivided the relevant spectrum block into twelve channels of 6 MHz each. It also devised criteria for separating the signals of stations transmitting on the same numbered or adjacent channels in order to minimize interference. Obviously, if two television stations were both to transmit on channel 4 in Washington, for example, not even the most sophisticated TV set tuner would be able

to differentiate between the stations' signals. So, by FCC fiat, stations transmitting on channel 4 in the northeastern part of the United States are set at least 170 miles apart, and other mileage separation requirements obtain in other parts of the country.

What did the FCC achieve with its engineering decision? By allotting only so much spectrum to television, by requiring channels to be of a specified bandwidth, and by establishing mileage separation criteria, it fixed the total number of VHF television stations possi-

... the FCC's decision limited entry into this most lucrative of all broadcast services and divided the country into an interlocking grid of shared monopoly markets.

ble in any given locale and nationwide. In short, the FCC's decision limited entry into this most lucrative of all broadcast services and divided the country into an interlocking grid of shared monopoly markets.

All this may have been justified in 1952, given conditions at that time. By 1972, however, when the old White House Office of Telecommunications Policy and the Justice Department's Antitrust Division urged new rules to accommodate up to 100 new VHF stations (the VHF drop-in proposal), many things had changed. Between 1950 and 1975, for example, the U.S. population had grown by 38 percent and gross national product by 430 percent (in constant dollars). In the same period, the Commerce Department's index of national advertising expenditures rose by 588 percent. Now, commercial television was already chiefly an advertising medium back in 1952, with its revenues and profits depending on the audience reached (plus the alternatives available to that audience). One does not need business school training to appreciate what the FCC's television engineering rules have done since then for industry profitability—or to understand why the National Association of Broadcasters objected so strenuously when the FCC finally agreed (in 1975) just to *consider* the VHF drop-in proposal. "Even *one* drop-in," said the NAB's filing with the FCC, "would be enough to undermine the Commission's successful television alloca-

tion plan" (December 1977). In other words, just one more broadcast TV station would contravene what the industry called the "fundamental laws of physics."

Strangely enough, those fundamental laws of physics do not obtain in Japan (which uses almost the same TV transmission system we do, a heritage of the MacArthur era). Japan is a country of about 145,000 square miles, one-twentieth the land mass of the United States. In 1978, it used only about 264 MHz of spectrum, divided into twelve VHF and thirty-two UHF channels, to distribute television programming through a total of some 7,300 broadcast TV stations. Of that number, 212 were the full-service variety prevalent in the United States, and the balance were relay outlets. By comparison, in the United States that year, the FCC allocated 408 MHz of spectrum, divided into twelve VHF channels and fifty-six UHF channels, to provide broadcast TV through some 1,000 full-service stations (600 VHF and 400 UHF) and 3,000 relay or translator outlets. And in California, which is 10 percent larger than Japan, FCC regulations allowed just 66 full-service and 349 translator stations. So much for the fundamental laws of physics.

Ultimately, of course, the opponents of additional TV stations had to give way—partly. In 1980 the FCC accepted a drastically limited version of the drop-in plan, approving only four new stations and opening the way for perhaps a few more. About the same time, it also established a new class of low-power TV stations.

For another example of delay and interest-group maneuvering, consider the saga of cellular mobile radio, one of the most protracted government endeavors since Mao's "Long March." Cellular mobile radio, which was developed by AT&T and Bell Laboratories, is a type of high-capacity mobile telephone service that uses many computer-controlled, very low-power transmitters to multiply by many times the number of telephone channels available for use in a given locale. The technology is extraordinary—so extraordinary, in fact, that it troubled the stakeholders. A local radio-telephone service of this sophistication poses a potential threat to the traditional hard-wire services that AT&T and others provide. It also might compete with the established radio common carriers that sell paging and conventional mobile telephone services, while, at the same time,

diminishing demand for purely private, user-run mobile systems (a matter of some interest to the dominant manufacturers of equipment for such systems, which include Motorola and General Electric). Finally, the new public demand for cellular mobile radio would in all likelihood stimulate competitive entry into the radio equipment manufacturing business. In short, all the stakeholders stood to suffer—except for the public and the Japanese—from the introduction of "too much" cellular radio "too fast."

The FCC first called for comments on how best to develop cellular services in July 1968. This was only the beginning of a regulatory and appellate story whose legal chapter was not closed until this spring and which, considering the number of applications and competing applications now pending at the FCC—some 6,000 at last count—may well never be completed. While estimates vary, most observers expect—or once expected—the industry to generate profits of at least \$1 billion annually. Yet for fifteen years, the advent of this potentially highly valued service was blocked by a combination of rigid regulatory procedures and well-paid, imaginative communications lawyers.

What's to Be Done?

Given the frustrations and economic inefficiencies inherent in so much of the prevailing frequency management, lawyers and economists have hypothesized a number of alternatives. To minimize licensee selection delays, Congress has authorized (but the FCC has not yet used) both straight and weighted lotteries. More ambitious schemes would have the government simply selling off chunks of spectrum to the highest bidder, as the Interior Department does periodically with oil-drilling leases and grazing rights to federal lands. While there is not yet a consensus on which option should be pursued, here are the chief "principles" or considerations that have been explored.

Spectrum Fees—Small and Large. First, of course, there is the proposal that, for want of a better term, both the Carter and the Reagan administrations have labeled the "equity principle"—namely, that in the interest of fairness,

(Continues on page 47)

guidelines or allow research to proceed before finishing its environmental impact statement. The second suit charged that the agency's impact statement on one of its own proposed DNA experiments was inadequate. The court upheld the agency, however, and allowed the research to proceed.

• The patent issue arose in 1976 when Stanford University and the University of California asked NIH for an advisory opinion on whether they could patent DNA inventions they had developed with the agency's financial support. Under a presidential order issued in 1963, the federal government can enter into an "institutional patent agreement" with a university or nonprofit institution waiving federal rights to inventions developed under federal grants and contracts. The Department of Justice, arguing that DNA inventions were too important to be handled under these IPA rules, wanted the federal government to keep title to all patents in the area, as it does for nuclear fission. Private parties were already allowed to patent other biological products and processes, however, and the NIH director concluded that there was no compelling reason not to extend these rights to federally supported recombinant DNA inventions as well. (The Supreme Court's *Chakrabarty* decision confirmed this line of reasoning.) Commercial projects received another boost when Congress passed the Patent and Trademark Act of 1980, which gave universities, small businesses, and nonprofit organizations the right of first refusal to ownership of items they invent under government grants and contracts.

In the past few years, as commercial applications of DNA research have developed, the industry's programs of voluntary compliance have become more sophisticated. The author believes that NIH succeeded in creating a "flexible, open system that can accommodate new scientific information" without the new legislation or new independent regulatory commission that many had called for early in the controversy. He concludes that the openness of the process by which the guidelines were developed helped ensure their survival, since oversight by Congress, the executive branch, and the public and scientific communities strengthened the reliability of NIH's decision making and ensured public acceptance of its eventual decision.

Thoughts on Broadcasting Reform

(Continued from page 20)

if not greater economic efficiency, radio frequency users should have to pay a fee at least large enough to recover the out-of-pocket costs of administering the current regulations. At present, private users of the radio spectrum—which are among the most prosperous elements of American business—do not pay even nominal filing fees. The FCC tried in the seventies—halfheartedly, some say—to impose small annual user charges sufficient to make the agency self-sustaining, but its efforts were overturned on appeal. More recently, Senator Bob Packwood (Republican, Oregon) and others on the Senate Commerce Committee have commendably called for adoption of such a fee system by statutory means.

Even this very rudimentary application of spectrum economics, however, has encountered strident opposition. Parts of the industry object to having to pay fees for what they contend taxes should cover. State and local government agencies want exemptions. Then, of course, there is the question whether the federal government itself should be charged for its occupancy of some 40 percent of the radio spectrum. Federal agency use now is regulated by the National Telecommunications and Information Administration (NTIA) of the Commerce Department, and relative to the FCC's cost of enforcing its private sector regulations, NTIA's costs are modest indeed. But if the government were to be assessed at the same rate as private users, those costs would be substantially bigger.

Not many players in the spectrum economics field, however, are content to simply fulfill the "equity principle." For some authorities—including Chairman Timothy Wirth (Democrat, Colorado) of the House subcommittee on telecommunications, at least until recently—no deregulatory scheme is acceptable unless it embodies a second principle, "equity plus." That principle would require the fee to cover not merely the costs of regulation but also some part of the economic value of the privilege conferred.

Underlying this approach to broadcast deregulation is the belief that the prevailing regime ensures a sort of payment-in-kind to the public. In return for their radio or television licenses, the argument goes, broadcasters be-

come public trustees and are required to undertake sundry tasks that the government, if not the public, considers socially redeeming. Thus, broadcasters have to give discount rates to political candidates, air a certain number of hours of “uplifting” public-affairs shows that no one would ever sponsor, and so forth. If these regulatory impositions are to be lifted as part of an overall deregulation measure, broadcasters must, in fairness, pay more than just the administrative costs of their own regulation.

This ransom or hostage approach has a certain logic and enjoys fairly widespread appeal among all parties except TV broadcasters, who are strongly opposed. The most obvious problem it raises is how to set the fee—that is, how best to calculate the “true value” of the various public services the present regulatory regime supposedly provides. A related problem, once again, is what to charge government for its use of the spectrum.

Ideally, one would want spectrum costs to be figured into the overall cost of the government’s spectrum-consuming programs. In estimating the total costs of a weapons system, for example, defense planners should be obliged to take into account not only its hardware costs, but the “price” of the spectrum needed to support it as well. Currently, they pay nothing for the radio channels they use—nor does any other part of the federal establishment, including Congress, the Supreme Court, the Postal Service, even the FCC itself. Obviously, however, federal spectrum usage costs something, and perhaps a substantial amount. Were the radio spectrum not a free good to government agencies, they might release for private exploitation part of the 40 percent of the spectrum they now use. They might also have an additional incen-

Were the radio spectrum not a free good to government agencies, they might release for private exploitation part of the 40 percent of the spectrum they now use.

tive to use the spectrum more efficiently, by purchasing more finely tuned equipment, for example.

The practical problems of moving to a federal “equity plus” assessment make one wonder

whether this trip is really necessary. Is the defense budget—which some find too high already—to be further ballooned? Since the receipts from any such assessment would simply flow from one agency’s pocket to another’s, why bother? What about the prospect that foreign countries might follow the U.S. example and begin levying charges on U.S. government use of radio frequencies abroad? Congress might be particularly loath to sanction budgetary churning in this area, given today’s fiscal austerity imperatives, if the scheme also meant that our government would pay Japan for the radar and associated communications operations we support today to defend its islands. Placing “equity plus” assessments on federal spectrum users, in short, may be economically elegant. But persuading Congress to embark on a brave journey toward greater economic efficiency is another matter.

A Spectrum Market. If radio frequency users are to reimburse the government for both regulatory costs and the “public service” benefits forgone, it would seem logical to give them some kind of infeasible property right in

As a practical matter, most licensees already enjoy a property right of sorts, the simplistic language of the 1934 Communications Act notwithstanding.

their frequency. As a practical matter, most licensees already enjoy a property right of sorts, the simplistic language of the 1934 Communications Act notwithstanding. Legally, a property right in its most fundamental sense is simply the ability to enlist the government’s aid in furtherance of one’s prerogatives. One has a property right to one’s home, for example, because one can enlist the aid of the police, the courts, or other governmental agencies to keep somebody uninvited from moving in.

In the case of radio users, the FCC license confers among other fundamental rights the power to enlist the government’s help in securing the user’s relatively exclusive use of the channel involved (unimpeded in the case of most services). If, for example, another firm starts broadcasting on television channel 4 in

Washington, it is up to the government, not simply NBC, to get the trespasser to cease and desist. Most spectrum users today also enjoy yet another of the basic attributes of property, the right to pledge or alienate their holdings. Granted that the FCC's anti-trafficking rules still impose certain residual restrictions on license sales (a TV license, for example, cannot be sold separately from the station's facilities). But anyone who doubts there is a fairly active market in radio spectrum properties should check the weekly want-ads section in *Broadcasting*, the leading trade publication.

A substantial body of legal writing purports to address largely imaginary problems of adequately defining property rights to the spectrum. Suffice it to say that, despite the FCC's long-perpetuated myths about the people's airwaves, defining such rights is not really a problem, given the diversity of ownership and other entitlements schemes developed by generations of lawyers.

Although radio licensees may thus have property rights much like those one enjoys to one's home, these rights are subject to very rigid zoning codes. One may not, for example, aggregate rights to adjacent land mobile-radio channels and commerce broadcasting TV signals (even assuming that existing sets could decipher such signals). Conversely, and although not a few undoubtedly would like to do so, one may not obtain the rights to an unassigned, vacant UHF channel and break it down into land mobile-radio channels. As previously explained, under the FCC's table of allocations, one set of channels is allocated to one service, and another to another. That is why the economists go on to demand that channels be bought and sold as unencumbered, unzoned real estate, to be divided, combined, or otherwise exploited as efficiently as possible. This is not a completely fanciful notion, but it raises legal, economic, and technical problems that are even more complicated than those of the "equity plus" scheme. Not only are not all hertz technically equal, fungible, and interchangeable, but the FCC's categorical allocations generally track international allocations that are fairly well fixed by treaty. While we could legally depart from the international allocations, provided we did not cause interference to other signatories, ordinarily the United States sticks closely to the international radio frequency rules.

Two other obstacles stand in the way of moving quickly to a full market approach. The first is the size of the sunk (or embedded) costs associated with the present regulatory scheme. According to one estimate, for instance, there are now more than \$70 billion worth of television receivers in some 96 million homes, a hardware investment substantially larger than the broadcasting industry's. A change in our current engineering practices and rules would potentially jeopardize the efficient performance of those sets. Similar problems exist in other radio services, although perhaps to a lesser extent. The second obstacle is the impact that changes in the rules affecting other services might have on television equipment. As those who have experienced television interference from CB radio or other sources can attest, one service can directly affect the performance of others. The FCC minimizes these problems today by making relatively few changes in existing services and following the traditional frequency management rule that the "last in" (the new services) adapt to the existing radio spectrum environment—even when, as often happens, the incumbents can adapt more cheaply than the newcomers. In any event, the existence of substantial sunk costs, major public investment, and technical service interrelationships greatly complicates any plan to move to an unregulated market.

Finally, there is the familiar question of what to do about the federal government's portion of the spectrum. Idealists may think the government should buy spectrum just as it buys paper and typewriters, but realists know that will never happen, particularly given how much spectrum it consumes. Charging private users

Idealists may think the government should buy spectrum just as it buys paper and typewriters, but realists know that will never happen. . . .

but not the government is equally impractical, because the government's 40 percent is not concentrated in a particular portion of the spectrum but consists mostly of its share of bands that federal and private parties both use.

The theory of the second best teaches that if one has a solution to a problem—but a key in-

redient is unavailable—one is probably better off finding some quite different solution. In the case of the full market approach to spectrum economics, two of the necessary ingredients are to ensure (1) that we achieve far greater flexibility of spectrum use (including the ability to shift uses between allocation categories) and (2) that all users (or at least most) abide by the marketplace rules. And from the outset we know that the largest single user—government—in all probability will not play the game.

Toward Piecemeal Reform

The MacAvoy-Besen-Nelson law of deregulation holds that the more a given regulatory system departs from desirable competitive, pro-efficiency, and marketplace norms, the greater the costs of changing it and thus the harder it will be to change. Today's radio spectrum management system was designed initially to further engineering, not efficiency or competitive, goals. Given the major problems that have been encountered in simply trying to implement the "equity principle"—that most rudimentary of the spectrum economics notions—the chances of our shifting to a full-blown spectrum market in the short run are not great.

Fortunately for the dyed-in-the-wool regulators, however, we are already implementing some variations on that scheme. Be sure not to tell anyone. But, for a long time, people have actually been selling FCC radio frequency licenses, the people's airwaves—although, for propriety's sake, the price in the pertinent sales documents is labeled "capitalized good will and other intangibles." The FCC this spring sanctioned subdividing FM radio channels in some instances in order to allow FM broadcast licensees to utilize the subcarrier portion of their signal to transmit data, to provide paging or beeper services, and the like. Merrill Lynch and public broadcasters have an experimental authorization to explore means by which the "vertical blanking interval" that is part of the television signal can be exploited for common-carrier-like offerings. Piggybacking services of these kinds are one of the objectives of those who are urging upon us a purer, and more obvious, regime of spectrum economics.

We are, in short, kind of edging up to a system of spectrum economics, and someday we may even get there. But it will not be soon. ■

CAB + ICC + FMC = NTC?

(Continued from page 11)

matter. The ICC exercises the same sort of policy judgment when it considers new applications for trucking authority.

To complicate matters, the executive branch may well wish to appear to distance itself from especially touchy or unpopular decisions. One such notable case is that of reciprocity in international traffic, where the White House currently has it both ways: the independent CAB makes the determination that foreign countries have unfairly denied reciprocal landing rights to U.S. carriers (and is thus supposed to take the heat) but the President himself has ten days in which to disapprove its retaliatory measures. Similarly, the FMC recently came close to retaliating against Venezuela's shipping lines for that country's alleged exclusion of U.S. carriers from some bilateral trade, with the executive branch reportedly exerting considerable influence behind the scenes. (The dispute was resolved through diplomatic negotiations instead.) Even on reciprocity matters, however, there is precedent for vesting power directly in the executive branch: the Interior Department passes judgment on foreign reciprocity in granting mining rights on public lands.

Reformers might have more clout on these structural matters if they all agreed on one view. Instead, one school of thought holds that structural reform is, if not irrelevant to the substance of agency decision making, at least a tremendous diversion from the task of substantive reform. Those who believe that structures do matter are more or less evenly split between proponents of independent-agency and executive branch status, quasi-judicial and informal decision making, and single-administrator and multi-commissioner format, so that they practically cancel each other out. The political actors, for their part, typically take a strong interest in the subject even if they do not have an interest in the substantive outcomes.

Perhaps the assertion that would meet with the widest approval is that deregulation should be taken as far as it can go before any structural reform is attempted (which is the Transportation Department's position, too). As one Capitol Hill staffer put it: "Empty the boxes before you stack them."